

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
13 October 2005 (13.10.2005)

PCT

(10) International Publication Number
WO 2005/094883 A3

- (51) International Patent Classification⁷: **C07K 16/44**, (A61K 39/40)
- (21) International Application Number:
PCT/GB2005/001108
- (22) International Filing Date: 24 March 2005 (24.03.2005)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
0407008.2 27 March 2004 (27.03.2004) GB
- (71) Applicant (for all designated States except US): **HAPTO-GEN LTD** [GB/GB]; Polwarth Building, Foresterhill, Aberdeen, Aberdeenshire AB25 2ZD (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **CHARLTON, Keith, Alan** [GB/GB]; Haptogen Ltd, Polwarth Building, Foresterhill, Aberdeen, Aberdeenshire AB25 2ZD (GB). **PORTER, Andrew, Justin, Radcliffe** [GB/GB]; Haptogen Ltd, Polwarth Building, Foresterhill, Aberdeen, Aberdeenshire AB25 2ZD (GB). **BROADBENT, Ian** [GB/GB]; Haptogen Ltd, Polwarth Building, Foresterhill, Aberdeen, Aberdeenshire AB25 2ZD (GB).
- (74) Agent: **BASSIL, NICHOLAS, Charles**; Kilburn & Strode, 20 Red Lion Street, London WC1R 4PJ (GB).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
12 January 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHODS FOR INDUCING AUTOLYSIS IN INFECTIOUS BACTERIA

(57) Abstract: The present invention relates to methods for the killing of infectious bacteria by modulating the extra-cellular concentration of bacterial cell signalling molecules. This has the effect of inducing rapid cell death (autolysis) in the majority of bacterial cells, and preventing virulence or restoring a benign state in surviving cells. These receptors have applications for the treatment of individuals with susceptibility to infection, the treatment of patients with existing infections, in disease management, and in related applications where the host for infection is an animal or plant. The compositions described herein are particularly relevant to *Pseudomonas aeruginosa* infection, for example in the treatment of pulmonary infection in cystic fibrosis patients, and represent a unique bactericidal medication that does not directly target the bacteria.